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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,063	10/29/2001	Norbert Jung	DE 000189	9393

24737 7590 09/22/2005

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EXAMINER	
PATEL, SHEFALI D	

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/040,063	JUNG ET AL.	
	Examiner	Art Unit	
	Shefali D. Patel	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8 and 10-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8 and 10-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment was filed on June 16, 2005.

2. Claims 1-8 and 10-19 are pending in this application.

3. Claim 9 has been cancelled; claims 11-19 are newly added.

4. 35 U.S.C. 112 rejections has been overcome and withdrawn regarding claims 5 and 10.

Response to Arguments

5. Applicants' arguments with respect to claims 1-4, 6, 8, 9-10 (Remarks on pages 6-8) have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-4, 6, 8, 10-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman (US 6,437,338) in view of Dillen (US 5,530,935).

With regard to **claim 1** Hoffman discloses elements of at least two quantities of image points and/or groups of image points being read out at a different scanning rate is explained by in col. 4, line 61 to col. 5, line 7. Hoffman explains that selected regions, 102 in figure 3, corresponding to quantities of image points, are readout at different rates, corresponding to different scanning rates. Hoffman does not expressly disclose temporal resolution of region in interest within the imaged area. Dillen discloses having higher temporal resolution within the region of interest at col. 7 lines 38-55. Dillen discloses having different frequency (higher for the region of interest (ROI) and lower for the surrounding area of

the ROI) of the image to discard the lower frequency and only evaluating the higher frequency portion. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teaching of Dillen with Hoffman. The motivation for doing so is to convert the only ROI portion into a video signal. Therefore, it would have been obvious to combine Dillen with Hoffman to obtain the invention as specified in claim 1.

With regard to **claim 2**, the image points being grouped so as to form lines of a two-dimensional image and that the lines that belong to a quantity are all read out at a uniform scanning rate is illustrated by Hoffman in figure 3 and explained in column 2, lines 36-38. The rows in a selected region 102 are each readout at a uniform scan rate as explained by Hoffman in column 4, lines 61-63 (wherein different regions are readout at different rates, but rows within a region 102 are readout at the same rate).

With regard to **claim 3**, the lines of image points of the image being alternately assigned to at least two quantities with different scanning rates is explained by Hoffman in column 4, line 61 to column 5, line 7. In figure 3, Hoffman illustrates plural image regions, which are each readout at different rates. So the rows from each region are assigned to different scanning rates.

With regard to **claim 4**, the quantities of image points and/or groups of image points overlapping at least in a region of the image surface is illustrated by Hoffman in figure 3. The drawings of the instant application illustrate a Region of Interest (ROI) surrounded by the background in figure 1. Similarly, Hoffman explains that the ROI can be selected in an image in column 3, lines 44-47. Therefore, the regions 102 corresponding to the ROI would be readout at one scanning rate, whereas the regions 102 corresponding to the background would be readout at a second scanning rate. Furthermore, the regions 102 of Hoffman are all on the same image plane.

With regard to **claim 6**, the image sensor being sensitive to X-rays is explained by Hoffman in the abstract by the x-ray detector.

With regard to **claim 8**, the addressing unit being arranged in such a manner that it selects the addressable image points and/or groups of image points at a different scanning rate is explained by Hoffman in column 4, line 61 to column 5, line 7. Hoffman explains that scan sequencer 110 selects regions 102, corresponding to addressable image points, at different rates, corresponding to different scanning rates. Also, as explained above in claim 1 Dillen discloses scanning at different rate as well as Hoffman. Dillen also discloses sensor having higher temporal resolution as discussed above in claim 1.

Claim 11 recites identical features as claim 2. Thus, arguments similar to that presented above for claim 2 is equally applicable to claim 11.

Claim 12 recites identical features as claim 3. Thus, arguments similar to that presented above for claim 3 is equally applicable to claim 12.

Claim 13 recites identical features as claim 4. Thus, arguments similar to that presented above for claim 4 is equally applicable to claim 13.

Claim 14 recites identical features as claim 8. Thus, arguments similar to that presented above for claim 8 is equally applicable to claim 14.

Claim 15 recites identical features as claim 11. Thus, arguments similar to that presented above for claim 11 is equally applicable to claim 15.

Claim 16 recites identical features as claim 12. Thus, arguments similar to that presented above for claim 12 is equally applicable to claim 16.

Claim 17 recites identical features as claim 13. Thus, arguments similar to that presented above for claim 13 is equally applicable to claim 17.

Claim 19 recites identical features as claim 6. Thus, arguments similar to that presented above for claim 6 is equally applicable to claim 19.

8. Claims 5, 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of Dillen (US 5,530,935) as applied to claims 1-4, 6, 8, 10-17 and 19 above, and further in view of Donges et al (U.S. Patent No. 4,736,401).

Referring to claim 5, the further processing of the signals from image points read out, notably their amplification, being performed in dependence on the relevant scanning rate of the image points is not explicitly explained by Hoffman. However, Donges et al explain that the amplification of an x-ray scanner (explained in the abstract) is controlled by the scanning rate in column 2, lines 3-8. Donges et al explain that this processing is done to maintain a constant output signal. The systems of Hoffman and Donges et al are both concerned with x-ray scanning devices as explained in the abstracts of both references. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to process the signals from image points read out, notably their amplification, dependent on the relevant scanning rate of the image points, as suggested by Donges et al, in the system of Hoffman because the images output cy the detector would be more consistent.

Referring to claim 10, the reading unit being arranged in such a manner that it bases the processing, notably the signal amplification, on the scanning rate at which the relevant image points and/or groups of image points are addressed corresponds to claim 5.

With regards to **claim** 18 It would have been obvious matter of design choice to modify the Hoffman (in view of Dillen) reference by having different groups of image points since applicant has not discloses that having different groups of image points solves any stated problem or is for any particular purpose and it appears that the Hoffman and Dillen would perform equally well with Donges et al. as Donges et al. discloses the amplification of an x-ray scanner (explained in the abstract) controlled by the scanning rate in column 2, lines 3-8.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hoffman in view of Dillen (US 5,530,935) as applied to claims 1-4, 6, 8, 10-17 and 19 above, and further in view of Lyons et al (U.S. Patent No. 6,713,773 B1).

Referring to claim 7, the image points and/or the groups of image points that are read out at a lower scanning rate being irradiated with a lower intensity is not explicitly explained by Hoffman. However, Lyons et al explains that the irradiation dosage, corresponding to the irradiation intensity, is a product of the rate at which the beam is being scanned in column 2, lines 25-28. Lyons et al explain that such a system is capable of delivering a precise item-specific dose of irradiation in column 1, lines 15-18. The system of Lyons et al is also concerned with detecting x-ray emissions as explained in the abstract. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to irradiate image points that are read out at a lower scanning with a lower intensity, as suggested by Lyons et al, in the system of Hoffman because the dosage of radiation would be more precise.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shefali D. Patel whose telephone number is 571-272-7396. The examiner can normally be reached on M-F 8:00am - 5:00pm (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on (571) 272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shefali D Patel
Examiner
Art Unit 2621

September 15, 2005